

Attorney Docket No. LUKP:108US
U.S. Patent Application No. 10/791,123
Reply to Office Action of June 9, 2005
Date: September 8, 2005

Amendments to the Specification

Please replace paragraph 0009 with the following amended paragraph:

[0009] In an exemplary embodiment, the pressure relief device advantageously has an input side intake from the master cylinder and an output-side discharge to the slave cylinder. Provided between them is a chamber with an ideally negligible dead volume that is expandable by means of an axially displaceable piston as a function of pressure stored in the hydraulic line. Of course the piston is sealed off from the chamber with sealing means; for example, sealing rings, such as O-rings or pistons seals as are known from master and slave cylinders, can be used. This piston is blocked in its axial displacement by a fixing device as long as the pressure relief device is not operated. In this context, the fixing device is in operative contact with the operative connection of the actuation device: for example, on the Bowden cable a pin that engages in a radical radial direction with respect to the piston axis may be provided that engages in the piston via movement of the Bowden cable. The piston may be fixed alternatively or additionally using other means, such as electrical means like electromagnets or piezoelectric elements.

Please replace paragraph 0014 with the following amended paragraph:

[0014] The invention is explained in detail in relation to Figures 1 to 4.

In the drawing:

Figure 1 shows a schematic drivetrain according to the invention; and

Figures 2 to 4 show an exemplary embodiment of a pressure relief device in various operating states[.];

Figure 5 depicts a pressure relief integrated into a master cylinder of the present invention.

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Please replace paragraph 0015 with the following amended paragraph:

[0015] Figure 1 shows a schematically represented drivetrain 100 comprising an internal combustion engine 40 and, connected to its output side, a transmission 30 that in this case is a dual clutch 2 having two transmission input shafts 9a, 9b. In the power flow between internal combustion engine 40 and transmission 30, a dual clutch 2 having ~~output~~ input part 3, which is joined to the crankshaft of the internal combustion engine in a rotationally fixed manner and, conventionally, in a rigid design as a so-called flex plate - as shown in Figure 1 - may be designed as axially elastic or as a dual-mass flywheel, and being disposed with two output parts 4a, and 4b, each of which is in rotational connection with transmission input shaft 9a and 9b as so-called clutch plates having frictional linings that form frictional engagement with input part 3. For this purpose input part 3 has an axially fixedly mounted pressure plate 10c having frictional engagement surfaces disposed on both sides and is rotationally connected to ring wheel parts 10a, 10b, which are provided for each output part, are axially displaceable, are rotationally connected to input part 3, and each have a frictional engagement surface. By axial displacement of ring wheel parts 10a, 10b, the frictional engagement with the frictional surfaces of output parts 4a, 4b is produced. The annular surfaces in the force-free state are spaced from pressure plate 10c using, for example, leaf springs in such a manner that there is no frictional engagement; that is, both of the output parts are forced-compression clutches.

Please replace paragraph 0018 with the following amended paragraph:

[0018] Integrated in line 7a, 7b is pressure relief device 1, which contains within a housing pressure relief devices 1a, 1b for the particular disengagement devices 5a, 5b. Of course the two pressure relief devices 1a, 1b may also be configured separately and may be integrated, for example, in one of the components of the disengagement system, for example in master cylinder 6a, 6b or slave cylinder 8a, 8b as seen in Figure 5. Pressure relief device 1 is controlled from outside by, for example, the driver. For this purpose, the driver has at his disposal an actuation device 11, which in the illustrated exemplary embodiment is the selection lever for

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selecting drive modes of the vehicle having the functions, for example: Park P, Reverse R, Neutral N, Drive D and manual jog control +,-.

Please replace paragraph 0021 with the following amended paragraph:

[0021] Transmission control device **50** controls the transmission actuation device, which disengages and engages gears in the transmission according to the driving situation. For this purpose the control device coordinates the actuators, such as electric motors, **21a**, **21b**, for actuation of clutches **2a**, **2b**, whereupon drivetrain **100** can be made completely automatic. Alternatively, the driver, by tapping on the selection lever in the position +/- can shift in a power-assisted way using automatic clutch **2**. If master cylinders **6a**, **6b** are in their idle position, that is, clutches **2a**, **2b** disengage, the pressure in the disengagement devices **5a**, **5b** is brought up to atmospheric pressure via connections to a compensating tank (not shown). Any pressurization that may be present is reduced. When master cylinders **6a**, **6b** are operated, the connection to the compensating tank is closed, in line **7a**, **7b** a pressure is ~~reduced~~ increased and friction clutches **2a**, **2b** are actuated. If control device **50** fails in a situation of this type, master cylinders **6a**, **6b** remain in their transitory position, whereupon clutches **2a**, **2b** remain in frictional engagement according to the position of the lever mechanism **4c**, **4d**. In order to then produce a decoupling of internal combustion engine **40** and transmission **30**, actuation device **11** is activated and thus the pressure relief device actuates so that the pressure built up in lines **7a**, **7b** is reduced and clutches **2a**, **2b** are opened. In an especially advantageous manner, various positions of actuation device **11** are used as selection levers to operate the pressure relief device. For example, pressure relief device **1** is always operated in the positions Neutral N and Park P, so the driver is not confronted with the decision to have to operate the actuation device in certain situations. Rather instead volume equalization device **1** is conjointly operated in situations in which the driver would operate the selection lever anyway, for example, when stopping or in unsafe driving situations.